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10/577,483

04/27/2006

Peter Tiesler

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112 PLEASANT STREET
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EXAMINER

YOUNG, EDWIN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/577,483	Applicant(s) TIESLER ET AL.	
	Examiner EDWIN A. YOUNG	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-104 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/27/2006 and 6/19/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is responsive to the preliminary amendment filed 4/27/2006. Claims 1-52 have been cancelled and new claims 53-104 have been entered. Claims 53-104 are currently pending in this application.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. PCT/EP04/11031, filed on 10/02/2004.

Information Disclosure Statement

The information disclosure statements (IDS) submitted on 4/27/2006 and 6/19/2006 have been considered by the examiner.

Drawings

The drawings were received on 4/27/2006. These drawings are acceptable.

Claim Objections

Claim 57 is objected to because of the following informalities: line 5, "packet (500) fifth shifting elements" should be changed to - -packet (500) of the fifth shifting elements- -. Appropriate correction is required.

Claim 57 is objected to because of the following informalities: lines 12-13, "packet (500) fifth shifting elements" should be changed to - -packet (500) of the fifth shifting elements- -. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 53-104 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 53 recites the limitation "a first shifting element" in line 11. This appears to be a double inclusion of limitations appearing in line 5. Line 11, "a first shifting element" should be changed to - -the first shifting element- -.

Claim 53 recites the limitation "the transmission housing" in line 11. There is insufficient antecedent basis for this limitation in the claim. Line 11, "the transmission housing" should be changed to - -a transmission housing- -.

Regarding claim 54, it is unclear what the limitation, "centrally and completely held in turning, operational contact in an axial direction by a single shaft" is referring to. The claim implies that one of the first and second planetary gearsets is provided in a central location, having every element thereof braked and being in contact by a single shaft. However, this is not shown in the figures, nor described in the specification. Claim 54 should be amended to clarify how the first and/or second planetary gearsets are arranged.

Claim 58 recites the limitation "the lamella-packet" in line 2. There is insufficient antecedent basis for this limitation in the claim. Line 2, "the lamella-packet" should be changed to - -a lamella-packet- -.

Claim 58 recites the limitation "the lamella-packet" in line 4. There is insufficient antecedent basis for this limitation in the claim. Line 4, "the lamella-packet" should be changed to - -a lamella-packet- -.

Claim 60 recites the limitation "the lamella-packet" in line 2. There is insufficient antecedent basis for this limitation in the claim. Line 2, "the lamella-packet" should be changed to - -a lamella-packet of the fifth shifting element- -.

Claim 61 recites the limitation "the lamella-packet" in line 3. There is insufficient antecedent basis for this limitation in the claim. Line 3, "the lamella-packet" should be changed to - -a lamella-packet- -.

Claim 62 recites the limitation "a second shifting element" in line 4. This appears to be a double inclusion of limitations found in claim 53. Claim 62, line 4, "a second shifting element" should be changed to - -the second shifting element- -.

Claim 68 recites the limitation "the servo apparatus" in line 2. There is insufficient antecedent basis for this limitation in the claim. Line 2, "the servo apparatus" should be changed to - -a servo apparatus- -.

Claim 68 recites the limitation "the servo apparatus" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. Lines 2-3, "the servo apparatus" should be changed to - -a servo apparatus- -.

Claim 71 recites the limitation "the lamella packets" in line 3. There is insufficient antecedent basis for this limitation in the claim. Line 3, "the lamella packets" should be changed to - -lamella packets- -.

Claim 76 recites the limitation "the two servo apparatuses" in line 2. There is insufficient antecedent basis for this limitation in the claim. Line 2, "the two servo apparatuses" should be changed to -two servo apparatuses-.

Regarding claim 82, the phrase "especially" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 88 recites the limitation "the servo apparatuses" in line 2. There is insufficient antecedent basis for this limitation in the claim. Line 2, "the servo apparatuses" should be changed to -servo apparatuses-.

Claim 92, line 6, "with the aid transmission housing" is unclear as to how the transmission housing and partition wall are related. Line 6, "with the aid transmission housing" should be changed to -with the transmission housing-.

Regarding claim 93, the phrase "that is to say" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 94 recites the limitation "the link" in line 4. There is insufficient antecedent basis for this limitation in the claim. Line 4, "the link" should be changed to -a link-.

Claim 94, lines 6-8 are unclear as to how the spur gear stage and/or chain sprocket are arranged. Specifically, it is unclear what element(s), "borders a transmission affixed housing cover".

Regarding claim 95, the phrase "i.e." renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 96, the phrase "that is to say" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 101 recites the limitation "the servo apparatus" in line 5. There is insufficient antecedent basis for this limitation in the claim. Line 5, "the servo apparatus" should be changed to - -a servo apparatus- -.

Claim 104 recites the limitations "the first forward gear stage" in line 2, "the second forward gear stage" in line 3, "the third forward gear stage" in lines 3-4, "the fourth forward gear stage" in lines 4-5, "the fifth forward gear stage" in lines 5-6, and "the sixth forward gear" in line 6. There is insufficient antecedent basis for these limitations in the claim. Furthermore, claim 104 should be amended to state that the shifting elements are arranged for each specific gear stage. For example, line 2 should be amended to state - -in a first forward gear stage, the first and the fourth shifting elements (A, D) are arranged- -.

Claim 104, line 7, "and in a reverse gear. the second" should be changed to - -and in a reverse gear, the second- -. As presently worded the claim contains two periods, which causes the claim to be indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 53-56, 58-60, 62-65, 67-70, 72, 73, 75-81, 84, 85, 87-89, 94-100, 103 and 104 are rejected under 35 U.S.C. 102(b) as being anticipated by KAO et al. (US 2002/0183160 A1).

Regarding claim 53 as best understood, KAO et al. discloses a multistep automatic transmission (see Figs. 1 and 2) having an input drive shaft (17); an output drive shaft (19); at least first (40), second (30) and third (20) planetary gearsets, as well as at least first (54), second (52), third (58), fourth (56) and fifth (50) shifting elements; the first, the second and the third planetary gearsets are co-axial with one another; the second planetary gearset is located axially beside the third planetary gearset; a sun gear (22) of the third planetary gearset is connectable, via the first shifting element, with a transmission housing (60); a sun gear (32) of the second planetary gearset is connected to the input drive shaft; the input drive shaft is connectable, via the second shifting element, with a sun gear (42) of the first planetary gearset and the input drive shaft is engagable, via the fifth shifting element, with a link (49) of the first planetary gearset; the sun gear of the first planetary gearset is engagable, via the third shifting element, with the transmission housing and the link of the first planetary gearset is engagable, via the fourth shifting element, with the transmission housing; wherein the

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output drive shaft is connected to a ring gear (44) of the first planetary gearset by a link (29) of the third planetary gearset, a link (39) of the second planetary gearset is connected to a ring gear (24) of the third planetary gearset, and the link of the first planetary gearset is connected to a ring gear (34) of the second planetary gearset; and wherein the second and the fifth shifting element are located axially between the first and the second planetary gearsets.

Regarding claim 54 as best understood, KAO et al. discloses at least one of the first (40) and the second planetary gearset are centrally and completely held in turning, operational contact in an axial direction by a single shaft (17).

Regarding claim 55 as best understood, KAO et al. discloses the single shaft, which engages the first and the second planetary gearsets in the axial direction, is the input shaft (17).

Regarding claim 56 as best understood, KAO et al. discloses a lamella-packet of the fifth shifting element (50) having a diameter greater than a diameter of a lamella-packet of the second shifting element (52).

Regarding claim 58 as best understood, KAO et al. discloses a friction surfaced, inner diameter of coated lamellas of a lamella-packet of the second shifting element (52) being smaller than a friction surfaced, outer diameter of coated lamellas of a lamella-packet of the fifth shifting element (50).

Regarding claim 59 as best understood, KAO et al. discloses a connecting agent between the link of the first planetary gearset and the ring gear of the second planetary gearset form in combination an outside lamella-carrier of the fifth shifting element (50).

Regarding claim 60 as best understood, KAO et al. discloses coated lamellas of a lamella-packet of the fifth shifting element (50) having on an outside diameter a complementary structural configuration, which, in a corresponding lamella contour of the outside lamella-carrier of the fifth shifting element, slidably engage in an axial direction.

Regarding claim 62 as best understood, KAO et al. discloses at least one of a servo apparatus of the fifth shifting element (50) and a servo apparatus of the second shifting element (52) activate a lamella-packet respectively assigned thereto, upon closure of the second shifting element in an axial direction of the first planetary gearset.

Regarding claim 63 as best understood, KAO et al. discloses at least one of the servo apparatus of the fifth shifting element (50) and the servo apparatus of the second shifting element (52) is placed axially and between a respectively thereto associated lamella-packet and the second planetary gearset.

Regarding claim 64 as best understood, KAO et al. discloses at least one of a servo apparatus of the fifth shifting element (50) and a servo apparatus of the second shifting element (52) activate a lamella-packet respectively assigned thereto, upon closure of one of the fifth or the second shifting elements axially in a direction of the second planetary gearset.

Regarding claim 65 as best understood, KAO et al. discloses at least one of the servo apparatus of the fifth shifting element (50) and the servo apparatus of the second shifting element (52) is placed axially between the lamella-packet, which has been respectively thereto assigned, and the first planetary gearset.

Regarding claim 67 as best understood, KAO et al. discloses at least one of a servo apparatus of the second shifting element (52) and a servo apparatus of the fifth shifting element (50) being supported on the input drive shaft.

Regarding claim 68 as best understood, KAO et al. discloses at least one of a servo apparatus of the second shifting element (52) and a servo apparatus of the fifth shifting element (50) being supported on the sun gear of the first planetary gearset.

Regarding claim 69 as best understood, KAO et al. discloses the third and the fourth shifting elements being axially aligned in an area radially above the first, the second and the third planetary gearsets.

Regarding claim 70 as best understood, KAO et al. discloses the third and the fourth shifting elements are adjacent, whereby special lamella-packets of the third and fourth shifting elements, of at least similar diameter, are placed.

Regarding claim 72 as best understood, KAO et al. discloses the third shifting element (58) being located axially beside the first planetary gearset on a side remote from the second planetary gearset and the fourth shifting element (56) is placed in an area radially over the first, the second and the third planetary gearsets.

Regarding claim 73 as best understood, KAO et al. discloses at least one of an outer lamella-carrier of the third and the fourth shifting elements is integrated in the transmission housing.

Regarding claim 75 as best understood, KAO et al. discloses an activation direction of a servo apparatus of the third shifting element (58) and an actuation direction of a servo apparatus of the fourth shifting element (56) are in equal directions.

Regarding claim 76 as best understood, KAO et al. discloses at least one of two servo apparatuses of the third (58) and fourth (56) shifting elements is located axially between lamella-packets of the third and fourth shifting elements.

Regarding claim 77 as best understood, KAO et al. discloses at least one of a servo apparatus of the third shifting element (58) and a servo apparatus of the fourth shifting element (56) is at least partially integrated in the transmission housing.

Regarding claim 78 as best understood, KAO et al. discloses the first shifting element (54) being placed upon a side of the third planetary gearset which is remote from the second planetary gearset.

Regarding claim 79 as best understood, KAO et al. discloses the first shifting element (54) borders axially against the third planetary gearset.

Regarding claim 80 as best understood, KAO et al. discloses the first shifting element (54) borders on one of an outer wall of the transmission housing (60) or on a transmission housing cover, which is connected rotatably-fast to the transmission housing and forms an outer wall of the automatic transmission.

Regarding claim 81 as best understood, KAO et al. discloses the first shifting element (54), as seen in the axial direction, being placed in an area radially above the first, the second and the third planetary gearsets, the area, when seen in an axial direction, is radially above the third planetary gearset.

Regarding claim 84 as best understood, KAO et al. discloses an outer lamella-carrier of the first shifting element (54) is integrated within the transmission housing (60).

Regarding claim 85 as best understood, KAO et al. discloses a servo apparatus of the first shifting element (54) is integrated in the transmission housing (60).

Regarding claim 87 as best understood, KAO et al. discloses an activation direction of a servo apparatus of the first shifting element (54) and an activation direction of a servo apparatus of the fourth shifting element (56), are equally directed upon activation of the respective first and fourth shifting element.

Regarding claim 88 as best understood, KAO et al. discloses at least one of servo apparatuses of the first (54) and fourth (56) shifting element is placed axially between lamella-packets of the first and fourth shifting elements.

Regarding claim 89 as best understood, KAO et al. discloses an axis of the input drive shaft and an axis of the output shaft are one of the parallel or at an angle to one another.

Regarding claim 94 as best understood, KAO et al. discloses a spur gear stage (16), by means of which the ring gear of the first planetary gearset, and that with this ring gear and a link bound with the ring gear of the third or second planetary gearset, is operationally bound to the output drive shaft.

Regarding claim 95 as best understood, KAO et al. discloses the first spur gear of the spur gear stage (16) supported on the input drive shaft.

Regarding claim 96 as best understood, KAO et al. discloses the first shifting element (54) is placed between the third planetary gearset and the first spur gear of the spur gear stage (16).

Regarding claim 97 as best understood, KAO et al. discloses the first shifting element (54) is placed within a cylinder space, which is formed by the first chain sprocket (16), such that the first shifting element axially borders the third planetary gearset.

Regarding claim 98 as best understood, KAO et al. discloses a lamella-packet of the first shifting element (54) borders axially on the third planetary gearset.

Regarding claim 99 as best understood, KAO et al. discloses the input drive shaft and the output drive shaft are co-axial (see Fig. 15).

Regarding claim 100 as best understood, KAO et al. discloses the output drive shaft, which is operationally bound to the interior gear of the first planetary gearshift, centrally penetrates the third planetary gearset in an axial direction.

Regarding claim 103 as best understood, KAO et al. discloses by selective closure of the first, the second, the third, the fourth, and the fifth shifting elements at least six forward gear stages can be so shifted (see Fig. 2).

Regarding claim 104 as best understood, KAO et al. discloses the specific shifting element combinations for effecting the six forward stages and one reverse stage (see Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 53, 57, 59, 61, 69, 71, 99 and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over KORKMAZ et al. (US 6,572,507) in view of KAO et al. (US 2002/0183160 A1).

Regarding claim 53 as best understood, KORKMAZ et al. discloses a multistep automatic transmission (see Fig. 1) having an input drive shaft (10); an output drive shaft (11); at least first (2), second (3) and third (4) planetary gearsets, as well as at least first (7), second (8), third (5), fourth (6) and fifth (9) shifting elements; the first, the second and the third planetary gearsets are co-axial with one another; the second planetary gearset is located axially beside the third planetary gearset; a sun gear (20) of the third planetary gearset is connectable, via the first shifting element, with a transmission housing; a sun gear (16) of the second planetary gearset is connected to the input drive shaft; the input drive shaft is connectable, via the second shifting element, with a sun gear (12) of the first planetary gearset and the input drive shaft is engagable, via the fifth shifting element, with a link (15) of the first planetary gearset; the sun gear of the first planetary gearset is engagable, via the third shifting element, with the transmission housing and the link of the first planetary gearset is engagable, via the fourth shifting element, with the transmission housing; wherein the output drive shaft is connected to a ring gear (14) of the first planetary gearset by a link of the third planetary gearset, a link of the second planetary gearset is connected to a ring gear (22) of the third planetary gearset, and the link of the first planetary gearset is connected to a ring gear (18) of the second planetary gearset. However, KORKMAZ et al. does not

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disclose the second and the fifth shifting element are located axially between the first and the second planetary gearsets.

KAO et al. discloses an automatic transmission with the structure of claim 53, see rejection above, and wherein the second and the fifth shifting element are located axially between the first and the second planetary gearsets.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide the transmission of KORKMAZ et al. with the second and fifth shifting elements located axially between the first and the second planetary gearsets, in light of the teachings of KAO et al., in order to achieve the predictable result of reducing the axial dimension.

Regarding claim 57 as best understood, KORKMAZ et al. discloses the second (8) and fifth (9) shifting elements are combined as a structural component, with a lamella-packet of the second shifting element and a lamella-packet of the fifth shifting elements; a first servo apparatus for activation of the lamella-packet of the second shifting element and a servo apparatus of the fifth shifting element for activation of the lamella-packet of the fifth shifting element.

Regarding claim 59 as best understood, KORKMAZ et al. discloses a connecting agent between the link of the first planetary gearset and the ring gear of the second planetary gearset form in combination an outside lamella-carrier of the fifth shifting element (9).

Regarding claim 61 as best understood, KORKMAZ et al. discloses a common lamella-carrier for the second and fifth shifting elements (8, 9) forming a clutch space,

within which, a lamella-packet of the second shifting element and a servo apparatus of the second shifting element are placed.

Regarding claim 69 as best understood, KORKMAZ et al. discloses the third and the fourth shifting elements being axially aligned in an area radially above the first, the second and the third planetary gearsets.

Regarding claim 71 as best understood, KORKMAZ et al. discloses the third (5) and fourth (6) shifting element form a factory assembled group, which possesses lamella packets of the third and the fourth shifting elements and a common outside lamella-carrier for the third and fourth shifting element, a servo apparatus for the activation of the lamella-packet of the third shifting element and a servo apparatus for the activation of the lamella-packet of the fourth shifting element at least partially integrated in this said outside lamella-carrier.

Regarding claim 99 as best understood, KORKMAZ et al. discloses the input drive shaft (10) and the output drive shaft (11) being co-axial.

Regarding claim 102 as best understood, KORKMAZ et al. discloses the input drive shaft (10) being supported in the output shaft (11) (see Fig. 6).

Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over KAO et al. (US 2002/0183160 A1) in view of ILLERHAUS et al. (US 2003/0008737 A1).

Regarding claim 66 as best understood, KAO et al. discloses the transmission according to claim 53, described in detail above, but does not disclose at least one of a servo apparatus of the fifth shifting element and a servo apparatus of the second shifting element possessing a dynamic pressure compensation means.

ILLERHAUS et al. discloses a transmission having a clutch mechanism possessing dynamic pressure compensation means (see paragraph [0034]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have at least one of a servo apparatus of the second and fifth shifting elements of KAO et al. possess a dynamic pressure compensation means, in light of the teachings of ILLERHAUS et al., for the predictable result of compensating the dynamic pressure (see ILLERHAUS et al. paragraph [0034]).

Allowable Subject Matter

Claims 74, 82, 83, 86, 90 and 101 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWIN A. YOUNG whose telephone number is (571)272-4781. The examiner can normally be reached on M-TH 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/E. A. Y./
Examiner, Art Unit 3681

/CHARLES A. MARMOR/
Supervisory Patent Examiner, Art
Unit 3681